DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
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WASHINGTON DC 20310-0103

23 MAY 2005

Dr. Frank H. Akers, Jr.
Chair, Army Science Board
2511 Jefferson Davis Highway, Suite 11500
Arlington, Virginia 22202-3911

Dear Dr. Akers:

I request that the Army Science Board (ASB) expand the 2004 study on Balancing the Force. The study should be guided by, but not necessarily be limited by the Terms of Reference (TOR) described below.

Background: The U.S. Army is adopting a modular brigade structure to help alleviate the frequent deployments required to fight the Nation's Global War on Terrorism. The ASB 2004 summer study on "Balancing the Force" recommended enhancements into the modular brigades, which would significantly enhance their combat effectiveness and ease transition to the Future Combat System (FCS) force. A continuation of this 2004 study with a focus on the several areas enumerated below would assist the U.S. Army in making the transition from the current to the future force.

Issues for the TOR:

a. System of Systems (SoS) Developmental and Operational Testing Methodology: Examine concepts to evaluate SoS during development and operational testing. Consider testing a system of systems, which spans many aspects beyond traditional material testing and includes: Connectivity; system availability (not only hardware but also software functionality); Joint inter-operability, spiral insertion of new technologies, and threat reactive measures. The key questions to be addressed are: (1) What to test? (2) When to test? (3) How to test? (4) Where to test? and (5) Who will do the testing?

b. Military Modeling and Simulation (M&S): Examine the current state of military modeling and current programs to expand the state of the art. Focus specifically on: urban and stability operations; net-centric warfare; robotics; and treatment of system of systems to include joint components and threat alternatives. Include robust M&S linkage from warfighting experiments/games/analysis to associated sustainment/ logistics impacts--taking into account the variability of resources and capabilities associated with the modular force.

c. Software Development Improvements: Identify existing software applications, e.g., C2 applications, or applications currently in development that can be modified, revised or enhanced to support the modular force. Identify any modularity-specific constraints on software, and any opportunities that exist to enhance modularity. Identify and recommend software development practices that can allow appropriate development and testing of modular software capabilities to match the modular force. Identify emerging hardware trends that the software must be compatible with, in order to maximize the value to the modular force.

d. Assured Communications: Examine methods to assure communications and network availability within a modular brigade, with other brigades, higher headquarters and, Joint and Coalition organizations. Consider the challenges of maintaining communications in an urban environment and during periods wherein the threat makes a concentrated effort to disrupt the network and recommend a mitigation approach. Also, explore means to expand communications capacity to meet ever expanding requirements.

e. Technology Spirals: Review the readiness of systems and technologies recommended in the 2004 ASB study and being planned for FCS spirals. Recommend new and emerging capabilities from developments by the Services, Defense Advanced Research Projects Agency and others that could enhance spirals. Update the technology roadmap from the 2004 ASB study and recommend changes to the FCS spirals as well as technology insertions for modular Brigade Combat Teams (BCTs). Review lessons learned from recent operations in Operation Enduring Freedom and Operation Iraqi Freedom (e.g., platform survivability/protection, convoy escort and protection, urban battle command and Intelligence, Surveillance and Reconnaisance, etc.) and consider additional spiral opportunities to address new high payoff capabilities, both near-term and as follow-on spirals are fielded.

f. Doctrine and Organization: Consider the current modular brigade (including all types of BCTs and Units of Action designs) and its associated doctrine as a baseline from the 2004 ASB Summer Study. Analyze the impact of recommended spiral technology insertion into these brigades. Recommend organizational, training and doctrinal modifications, as considered appropriate.

g. Joint Interdependence: Conduct a two-part effort that will identify relevant metrics and potential trade variables as the basis for studies that measure varying degrees to which the Army relies on and contributes to Joint and other Service capabilities in the five operational interdependencies. Design trade studies for testing and evaluation and recommend findings from studies for inclusion in the revised Army Campaign Plan, as considered appropriate.

Clearly, many of the above topics are interrelated. Integration of recommendations regarding these areas is desired.

Study Sponsorship: Study Sponsor for this study is the Assistant Secretary of the Army for Acquisition, Logistics and Training.

Study Duration: The final report should be provided by August 15, 2005. A draft report for review and comment will be provided by June 15, 2005.

Sincerely,

Claude M. Bolton, Jr.
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)